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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,811	10/19/2000	Stanley W. Olson	BERG-2550/C2719	5391

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John P Donohue Jr Esq  
Woodcock Washburn Kurtz  
Mackiewicz & Norris LLP  
One Liberty Place - 46th Floor  
Philadelphia, PA 19103

EXAMINER

ABRAMS, NEIL

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/691811

Applicant(s)

Examiner

N. Abrams

Group Art Unit

2839

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

☒ Responsive to communication(s) filed on 2-18-03 (RCE) and amdt of 1-21-03

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

☒ Claim(s) 15-18, 42-46 is/are pending in the application.

Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 15-18, 42-46 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some\* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other \_\_\_\_\_

Office Action Summary

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The request for continued examination (RCE) transmitted is acknowledged. A first action in such RCE follows.

Claims 15-19 and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaudenzi in view of LoVasco and Dozier and Japan 2-28990.

Gaudenzi, fig. 8, note ~~contact~~ <sup>contact</sup> 56 and hold down ~~pin~~ <sup>pin</sup> 58. A reflow step secures the contact and hold down to pcb 60 while due to large size of hole 62 the contact 56 is able to self center on a pad on pcb 60. Such self alignment of solder balls also taught by Dozier, col. 25, line 50 to col. 26, line 8, see discussion of loose pin alignment. Also obvious to form the pins of Gaudenzi, col. 6, lines 20-25 and in view of Japan patent, fig. 4 at 3 and use of stops in LoVasco at 432, etc. <sup>58 with stops in view</sup> This would prevent undue deformation of the solder balls and provide space for cooling. Reflow process is standard and further taught by LoVasco and Japan with single reflow for long and short pins, fig. 1. The large size of hole 62 could readily result in securement of pin 58 subsequent to attachment of solder balls 56. Compare fig. 8 to applicants fig. 6B. If application post 525 would cool more slowly than the solder balls (page 11) Gaudenzi post 58 should perform similarly. For article claims 42-46, the patents are similarly applied. Claim 42, lines 9, 10, "subsequent to" method limitation does not clearly define structural features of the product and cannot be relied upon to overcome the prior art. For claim 42, no "product limitation" is seen to define over Gaudenzi. If one is present it should be pointed out.

Claims 16-19, 43-46 define features shown by the prior art and do not appear to be at issue.

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Applicant's arguments filed with the amendment have been fully considered but they are not persuasive. See above discussion.

Any inquiry concerning this communication should be directed to N. Abrams at telephone number 308-1729.

Abrams/ek

03/21/03

  
M. Allen  
322